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In re Application of	:
Volker Hilarius et al	:
Serial No.: 09/866,926	: PETITION DECISION
Filed: May 30, 2001	:
Attorney Docket No.: MERCK2264	:

This is in response to the petition under 37 CFR 1.144, filed October 24, 2005, requesting withdrawal of an improper restriction requirement.

#### BACKGROUND

A review of the file history shows that this application was filed under 35 U.S.C. 111 and contained claims 1-15, as filed. A first examiner in a different Technology Center mailed a first restriction requirement to applicants on February 10, 2003, grouping the claims as follows:

- Group I, claims 1-10 and 15, drawn to an ionic liquid;
- Group II, claims 11 and 13-14, drawn to an electrochemical cell and electrolyte;
- Group III, claim 12, drawn to a supercapacitor.

The examiner held the groups were related as intermediate/final product and were separately patentable. The examiner also required an election of species.

Applicants filed a reply on March 10, 2003, adding claims 16-17 and electing Group I with traverse, arguing that all claims depended on the ionic liquid for patentability and should be examined together. A species was also identified.

The application was transferred to an examiner in Technology Center 1600. The examiner maintained the restriction requirement but changed the basis to product and process of use. The examiner also defined a generic concept to which the examination of the compound would be restricted based on  $K^+$  being an imidazolium cation and  $A^-$  being as claimed. The examiner rejected claims 1 and 15 under 35 U.S.C. 112, second paragraph for indefiniteness and claims 1-2, 4-5 and 9 under 35 U.S.C. 102(a) as anticipated by Kuhn et al or JP2000-254513. Claims 1-4 and 9 were rejected under 35 U.S.C. 102(b) as anticipated by JP 11-209583, JP 2000-17145 and

JP 11-171981. Claims 6 and 16-17 were rejected under 35 U.S.C. 103(a) as unpatentable over the same three JP references.

Applicants replied on November 12, 2003, amending claims 1, 7-9 and 16-17 and adding claim 18. Applicants again traversed the restriction requirement noting that there are no process claims so that there can be no product and process of use relationship on which to base the restriction requirement. Applicants replied to all other rejections of record.

A new third examiner mailed a Final Office action to applicants on February 11, 2004, maintaining the restriction requirement on the basis of the relationship of the groups, not that they are related as product and process of use, but failed to define what specific relationship existed. The examiner maintained the rejection of claims 1-2, 4-5 and 9 under 35 U.S.C. 102(a) as anticipated by Kuhn et al or JP 2000-254513. The examiner also maintained the rejection of claims 6, 16-17 under 35 U.S.C. 102(a) as unpatentable over Kuhn et al or JP 2000-254513 and JP 2000-17145.

Applicants filed a reply to the Final Office action on June 10, 2004, continuing the traversal of the restriction requirement and responding to all of the rejections. A supplement to the reply was filed on June 14, 2004, in which claims 1 and 16 were further amended and claims 19-21 were proposed to be added. By Advisory action mailed June 25, 2004, the examiner denied entry of the amendments as raising new issues and adding claims without canceling an equal number of claims. However the action also stated that the rejections under 35 U.S.C. 102(a) and 35 U.S.C. 103(a) had been overcome, but that the amendment did not place the case in condition for allowance.

A second response after Final rejection was filed August 5, 2004, requesting clarification of the Advisory action as it appeared contradictory in that there were now no grounds of rejection to appeal but the case was not considered in condition for allowance. A Notice of Appeal was filed August 11, 2004. A second Advisory action was mailed to applicants on August 20, 2004, denying entry of the second amendment, again stating that the rejections had been overcome, but that it did not place the case in condition for allowance.

Applicants filed a request for a new Office action on October 5, 2004, indicating that there are no appealable issues. The examiner did mail a new non-Final Office action to applicants on January 7, 2005, maintaining that claims 11-14 were held as being non-elected subject matter and needed to be canceled. Claims 1-10, 15 and 18 were also objected to as containing non-elected subject matter.

Applicants replied on April 11, 2005, amending claim 16 and adding claims 19-21 and maintaining the traversal of the restriction requirement. The examiner mailed a Final Office action to applicants on June 24, 2005, continuing to maintain the restriction requirement and holding claims 11-14 non-elected and claims 1-10, 15, 18-19 and 21 as containing non-elected subject matter.

Applicants filed this petition on October 24, 2005, seeking withdrawal of the restriction requirement and election of species requirement.

## DISCUSSION

It is noted initially that this petition was not filed within the two month time period set in 37 CFR 1.181(f) for filing a petition to review an examiner's action. However, the time period is waived in this instance in view of examiner errors in prosecution of this application.

From the above prosecution history it is clear that the restriction requirement set forth under 35 U.S.C. 121 has been argued, modified and justified by the examiners in different ways. A review of the claims shows that applicants' claimed inventions are to an ionic liquid of the general formula:



where K is a set of eight clearly defined 5 or 6 member aromatic heterocycles substituted with up to five substituents, and A is a borate salt anion having many different substituents. Also claimed are an electrochemical cell using the ionic liquid and a supercapacitor using the ionic liquid. The claims are in an obvious combination-subcombination relationship. However, none of the examiners appears to have fully appreciated this. Although the first examiner separated the claims appropriately according to compound/composition claims versus cell and capacitor claims the relationship was improperly set forth as intermediate/final product and the arguments for restriction were improper. The second examiner in attempting to correct the first examiner's error allowed that the claims were in product/process of use relationship even though there were no process claims. However, the arguments used were again improper. The third examiner in maintaining the restriction requirement and responding to applicants' remarks that there were no process claims so the relationship could not be product and process of using used some circuitous logic to identify the compound claims as separate from products which used the composition, but never identified the relationship as combination-subcombination.

Claims in a combination/subcombination relationship in order to justify restriction therebetween must be shown to have two-way distinctness. In other words, both the subcombination and the combination must be separately patentable without reliance on the other's patentability. In this instance the compounds must be separately patentable on their own merits and the electrochemical cell and the supercapacitor must have a structure which is patentable over other known cells and capacitors without reliance on the ionic liquid composition. Such is not the case here since the structures for the cell and the capacitor are nominally recited and patentability is solely dependent on the ionic composition. Therefore, restriction was not proper and is withdrawn.

Applicants have also traversed the examiner's actions with respect to the election of species requirement set forth with the first restriction requirement. Such requirement was not improper and following applicants' identification of an individual species the guidelines of M.P.E.P. 803.02 must be followed. In contrast, the second examiner based on applicants' species elected, set forth a definition of the scope of the compositions to be examined. This scope was limited to imidazolium compound salts. In other words, the examiner limited the value of the K cation to only one of the eight structures listed in claim 1. On the other hand, the examiner did not restrict

or limit the borate cation even though there are more variations within the borate cation definition. Having identified all of the compounds represented by the  $K^+A^-$  formula as species under the general formula and having examined the elected species and found it to be patentable over the prior art, the examination was required to be expanded to other related species. It appears this was done in a limited degree and the additional species examined were also determined to be allowable. Having done this the examiner is now obligated to allow the entire genus or find art rendering other species unpatentable. The examiner's argument that each structure represented by K is, or has been, restricted under 35 U.S.C. 121 from the others is not supported by the prosecution history.

#### DECISION

The petition is **GRANTED**. The restriction requirement is withdrawn and an examination of all of the claims will be made.

**The application will be forwarded to the examiner for reconsideration of all of the claims on their merits. In view of this decision, the Final Office action, mailed June 24, 2005, is withdrawn.**

Should there be any questions about this decision please contact William R. Dixon, Jr., by letter addressed to Director, TC 1600, at the address listed above, or by telephone at 571-272-0519 or by facsimile sent to the general Office facsimile number, 571-273-8300.



George C. Elliott  
Director, Technology Center 1600